2008 PTES internships

ONCE AGAIN THE PEOPLE'S TRUST FOR ENDANGERED SPECIES IS PLEASED TO BE FUNDING A GROUP OF PROMISING RESEARCHERS AS THEY EMBARK ON CAREERS IN CONSERVATION. OUR SIX NEW INTERNS INTRODUCE THEMSELVES AND THE PROJECTS THEY'LL BE WORKING ON.

Allison Looser
Suffolk dormice

Previous survey work undertaken by Suffolk Wildlife Trust between 1999 and 2007 revealed that there are three main clusters of wild dormice in Suffolk. These are centred around the parishes of Bentley, Assington and Polstead. However it is not known how isolated these populations are, because the habitat between the woodlands has not yet been surveyed.

Working in conjunction with the Suffolk Wildlife Trust, I am assessing all the habitat corridors connecting the woodlands in each cluster. From this I can decide which should be the priority areas for creating new habitat corridors and if any existing habitat links could be improved by a change of management. I will also survey additional woodlands and hedges in each cluster so I can build up a better picture of dormouse distribution.

Top right: ***Mark Chambers is using his internship to pursue a long-standing interest in water vole conservation.***

Below left: ***Allison Looser is using nest tubes to survey potential dormouse dispersal corridors in Suffolk.***

Below right: ***Jennifer Skinner hopes her research will reduce bat fatalities at wind farms.***

The results will be used to encourage landowners to plant new hedgerows or fill gaps in existing ones. This will create a more permeable landscape for dormice in Suffolk, strengthening their populations and reducing the risk of localised extinction.

Jennifer Skinner
Bats and wind turbines

Bats are prone to collisions with wind turbines, and with more wind farms being proposed to meet the UK's energy requirements, it is essential the extent of bat mortality is known and attempts made to mitigate the risk. The potential scale of the problem was illustrated by studies at two wind farms in West Virginia and Pennsylvania, USA, where an estimated 1 764 and 2 900 bat fatalities were recorded in six weeks. Visual deterrents that have been successful for birds are not suitable for bats – and nor are the acoustic deterrents used to reduce cetacean entanglement in nets because ultrasound attenuates rapidly in air.

My project aims to test the hypothesis that electromagnetic radiation can deter bats from approaching wind turbines. I'm investigating whether the activity of bats in the vicinity varies when a portable radar is switched off

and on. For this I'll be using a combination of automatic bat recording stations and frequency division bat detectors. In addition, I'll be using insect traps to see if the radar affects abundance of bat food.

Mark Chambers
Derbyshire water voles

My interest in water voles came about by stumbling across an isolated community living quite happily undetected on a golf course. At the time I was well aware of the decline in their numbers but was shocked to discover the true fragility of the species whilst conducting volunteer survey work for the Durham Wildlife Trust (DWT).

With help from the DWT, I have designed a project to prioritise potential water vole reintroduction

sites in the area. To prioritise sites I thought it necessary to compose a reintroduction site score chart.

Using this chart I've been spending this summer surveying water courses looking for water voles and suitable sites for possible reintroductions. At the end of this internship I will have produced a prioritised list.

A large area of Derbyshire has no record of any water vole surveys so this work will update existing records and add new ones to the current database. I also hope to recommend habitat improvements and mink control strategies.

Rosie Trodden
Farmland bats

The intensification of modern agriculture has been blamed for declines in the range and abundance of many farmland bat species. The purpose of my research is to investigate the influence of farming practices on bat populations in agricultural landscapes in Scotland and to assess the value of conservation incentives such as the Rural Stewardship Schemes in providing foraging resources for bats.

Bat activity and the abundance of invertebrate prey will be assessed on 20 pairs of farms throughout Scotland in order to answer questions on whether farms in agri-environmental agreements offer better feeding opportunities for bats than non-participating farms. If so, I'll be asking which specific prescriptions have the greatest effect. In addition, the research will examine the effect of agri-environmental schemes on levels of bat activity and species diversity.

The conservation outcomes of this research will be to ensure that the requirements of bat species are considered in incentive schemes designed to encourage the management of suitable habitat, and to assess the effect of current management and protection policies and amend them as necessary to ensure maintenance of healthy bat populations in Scotland.

Andrea Barden
Badgers, cattle and TB

The incidence of TB in cattle has been on the rise since the 1980s and has had substantial economic and social impacts. As bovine TB can be transmitted between badgers and cattle, badger culls are often proposed as a possible solution for controlling the disease. However extensive studies in recent years have indicated that culling is not a viable option and that it could even intensify the problem. An alternative solution to the TB problem must therefore be found.

I am undertaking research into whether or not improved farm biosecurity measures, in the form of electric fencing, adapted gates and food troughs, can provide an alternative solution to the TB problem by reducing the level of contact between badgers and cattle.

My project will involve monitoring badger activity across several farms in Gloucestershire which have recently had new biosecurity measures introduced. I will monitor badger activity using camera traps placed at strategic locations around each farmyard.

In addition to this work I will also be looking at the potential for the development of badger-proof feed troughs and interviewing farm owners and employees to gain their feedback on the new measures.

Cally Quigley
Red squirrels in Cumbria

I'm working at the University of Cumbria to examine the use of habitat corridors by red squirrels. Work done by Claire Stevenson (a previous PTES intern) looked at the population viability of red squirrels on the Solway Plain and showed that linking two woodland networks through a corridor would significantly increase the long term viability of the species in the area.

Within the field of conservation biology there is considerable debate as to what constitutes a wildlife corridor and the impacts

Above left: ***Rosie Trodden's project addresses the issue of declining bat populations in agricultural landscapes.***

Above right: ***Cally Quigley is continuing the useful work on red squirrels begun by a previous PTES intern.***

Below: ***Andrea Barden is approaching the vexed issue of badgers and bovine tuberculosis.***

of such corridors on increasing connectivity between suitable areas of habitat in mosaic landscapes. I will investigate squirrel usage of a range of potential corridors using hair tube surveys. Hairs, identified to species in the laboratory, will enable a picture of corridor use to be established. Once the data is in place, I will undertake landscape ecology modelling at Forest Research in Edinburgh to model the best way of connecting the woodlands on the Solway Plain. I hope that this work will allow for better and more efficient designs of red squirrel reserves in the future and improve conservation of this valuable and threatened species.